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DIETARY PLANS FOR CARBOHYDRATE LOADING

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TECHNICAL REVIEW AND APPROVAL NMRI 89-94

The experiments reported herein were conducted according to the principles set forth in the current edition of the "Guide for the Care and Use of Laboratory Animals," Institute of Laboratory Animal Resources, National Research Council.

This technical report has been reviewed by the NMRI scientific and public affairs staff and is approved for publication. It is releasable to the National Technical Information Service where it will be available to the general public, including foreign nations.

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19. ABSTRACT (Continue on reverse if necessary and identify by block number) This report provides dietary plans suitable for "carbohydrate loading" (i.e., increasing carbohydrate intake in order to increase body glycogen stores). Two separate 7 day diet plans are presented, with the daily intake of 600 gm carbohydrate for each menu. One diet plan, NMRI-20, provides the necessary carbohydrate with 20% of the calories derived from fat (total calories ~3600 kcal/day). The second diet plan, NMRI-30, provides the same amount of carbohydrate with 30% of the calories derived from fat (total calories ~4000 kcal/day). Each menu is nutritionally complete, and provides adequate amounts of protein and fiber. Tables are presented for each daily menu, with separate tables that permit substitution of food items. All items are readily available foods. Palatability testing was conducted during our 1989 saturation dives to 150 fsw and the menus were found to be quite acceptable. The menus did not produce any untoward gastrointestinal complaints or symptoms.						
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INTRODUCTION

Increasing the amount of carbohydrate in the diet for 3-7 days prior to an athletic event, termed carbohydrate loading, has been shown to improve performance in endurance events (1,2). The additional amount of carbohydrate substantially increases muscle glycogen content above that occurring with normal diets and relates directly to observed increases in endurance time (1-3).

Earlier methods for carbohydrate loading required the athlete to first perform exhaustive exercise for several days to deplete muscle glycogen stores, then consume a high carbohydrate diet for 5-7 days prior to competition (4). Recent evidence has shown that exhaustive exercise is not necessary, and simply increasing carbohydrate intake (to 600 gm per day) for 3 days will increase muscle glycogen content by about 50% (5). This simplified method for carbohydrate loading results in enhanced performance akin to the longer, more rigorous method.

We have shown in a previous study (6) that a 3-day high carbohydrate diet will significantly increase the total amount of work that can be done during repeated bouts of 10 min rest and 20 min of leg exercise at 80% of maximum aerobic capacity while immersed in 25 °C water. It was also noted that core temperature declined less during immersion with the high carbohydrate diet. A commercial carbohydrate supplement (EXCEED, Ross Labs) was used to increase carbohydrate from 300 gm/day in the normal diet to 600 gm/day. The supplement resulted in a number of

gastrointestinal complaints, perhaps because it was a hyperosmotic solution.

This report provides nutritionally complete diet plans, using readily available foods, suitable for 3- to 7-day carbohydrate loading strategies. Two 7-day diet plans are presented, differing only in the percent of total calories derived from fat. Implementation of the diet can be achieved either in a free-living condition (e.g., "at home") or at shore- and ship-based facilities. One can choose any 3-7 daily menus from either or both diet plans, depending upon individual food preferences, and achieve the desired result.

Approach

The basic meal plans were taken from menus used during several saturation dives conducted at NMRI. Each day's menu provided for breakfast, lunch, dinner, and a snack.

Each daily menu was entered into a computer program (AutoNutritionist III N-Squared Computing, Silverton, OR) for computation of nutrient values. Adjustments were made in various types of food and their quantity to provide 600 gm of carbohydrate per day. Analysis was done to determine the percent of daily carbohydrate provided by each food. This analysis permits the user to select a substitute food item, if desired.

Two diet plans were prepared, each containing menus for 7 days. One diet plan (NMRI-20) provided 600 gm carbohydrate per day, with 20% of the calories provided by fat. These meal plans would be useful to someone wishing to restrict their dietary

intake of fat. The second diet plan (NMRI-30) provided 30% of the calories from fat, consistent with the average American diet and within guidelines recommended by the U.S. Dietary Goals.

It was not practical to develop an exact cost estimate for each diet because food prices varied according to locale and quantity of purchase. Cost estimates generated by the computer were in the range of \$10-12 per day per menu. A more important point, however, is that the diets were generated using commonly available foods. Therefore, the cost factor should be quite comparable to what would ordinarily occur with regular meals in a particular location.

NMRI-20 Diet

The seven daily menus for the NMRI-20 diet are presented in Appendix A. Each menu provides approximately 3600 kcal per day, with 20% derived from fat.

Appendix B lists the amount of carbohydrate and percent of total carbohydrate from each food for each of the NMRI-20 diet plans. This appendix permits a user to substitute a particular food item. For example, if using the menu for Day 1 (Appendix A) one might wish to find an equivalent substitute for cereal at breakfast. Cereal listed for Day 1 in Appendix B provides 13% of the total carbohydrate. Appendix B also indicates that 1.5 baked potatoes provide the same amount of carbohydrate. Therefore, the user could delete cereal and substitute 1.5 baked potatoes and still have the required amount of daily carbohydrate. In a similar fashion, any item listed for the other days in Appendix B

could be used as a substitute.

A simple calculation can be used to substitute for an item whose exact percent of carbohydrate does not match the item to be substituted. For example, Day 4 on NMRI-20 indicates that 3 cups of corn flakes cereal provides 10% of the menu's carbohydrate (Appendix B). One cup of fruit cocktail provides 5% of the carbohydrate. Therefore, 2 cups of fruit cocktail can be substituted for the 3 cups of cereal in order to keep the same total carbohydrate in the diet. It should also be noted that items in Appendix B that provide <2% of the carbohydrate can be deleted or used in other amounts, without need to find a substitute item, since this will have little effect on daily carbohydrate intake.

NMRI-30 Diet

Appendix C presents the 7 daily menus for the NMRI-30 diet. Each menu provides approximately 4000 kcal per day, with 30% derived from fat. Appendix D provides the percent of carbohydrate for each food item in the 7 NMRI-30 menus. Appendix D can be used in a fashion identical to that presented for Appendix B to determine appropriate substitute food items.

Evaluation of the Diets

Five of the daily menus for each diet were served to U.S. Navy divers during the course of separate saturation dives to 150 fsw. Apart from some individual preferences in food items or method of seasoning, the diets were well received. The cooks encountered no difficulty in preparing or serving the meals. No

instances of gastrointestinal complaints were found.

All menus were nutritionally complete and provided more than the recommended daily requirement for protein and fiber.

All diets provided 3600-4000 kcal per day in order to provide the 600 gm of carbohydrate that is considered necessary for carbohydrate loading. All of the amounts listed are minimum requirements. This caloric intake was well-tolerated by all subjects for the 5 days they consumed these diets. It would be unusual to have to decrease caloric consumption for the 3-5 days needed for carbohydrate loading; but, if that were necessary, the planner should ensure that high-carbohydrate foods (Appendices B and D) are not eliminated. It is more likely that the individuals who are carbohydrate loading will need more calories because they are larger or engaged in more strenuous activities than our subjects. If extra calories are needed, they can be provided by extra amounts of any food on the menu, as long as the minimum requirements are met.

Persons involved in an intensive physical training program may require additional amounts of calories. It is important to remember that these diet plans were designed specifically for carbohydrate loading. They are designed to be used 3-7 days prior to an "event" (e.g., a particular operational dive). As such, their maximum benefit will be achieved if the intense physical activity is scaled back during this period, much in the same manner as training is scaled back several days prior to competing in a marathon or triathlon.

Instructions for Use of Diets

1. Review Appendices A and C to decide which of the meal plans to use from NMRI-20 and NMRI-30 diet plan. Choice is based on individual preference for types of food.

2. Determine how many days you wish to carbohydrate load (3-7 days).

3. Select the appropriate number of daily menus for the loading period.

4. If substitution of food items is needed, consult the appropriate appendix (Appendix B for NMRI-20, Appendix D for NMRI-30). Substitutions can be made according to the directions in paragraphs 2 and 3 under the NMRI-20 diet or under the NMRI-30 diet.

Group Loading Plan

The food portions listed in Appendices A and C are for a single individual. If a group of individuals are to undergo a carbohydrate loading paradigm, it is recommended that a single menu plan be followed. Determining the amount of food needed is achieved by multiplying each portion size by the number of people. Totalling the amount of a like item for each day (e.g., margarine) will determine how much to buy. A sample of the amount needed for 10 persons using Day 1 of NMRI-30 is presented in Appendix E. If an operational unit needs assistance determining group amounts, contact can be made with one of the authors at NMRI.

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APPENDIX A

NMRI-20

HIGH CARBOHYDRATE DIETS (20% FAT)

NMRI-20
DAY 1

Food Name	Serving	Portion	Amount
BREAKFAST			
ORANGE JUICE-CAN	1.50	CUPS	373.5 GMS
CEREAL-TOTAL	3.00	CUPS	99.0 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	56.0 GMS
JAMS/PRESERVES-REGULAR	4.00	TBSPS	80.0 GMS
LUNCH			
ROLL-BROWN & SERVE-ENR	2.00	ITEMS	52.0 GMS
CHILI CON CARNE/BEANS-CAN	1.30	CUPS	331.5 GMS
SPINACH-LEAF-FROZ-BOIL	0.75	CUP	142.5 GMS
FRUIT COCKTAIL-CAN/JUICE	1.50	CUPS	372.0 GMS
CIDER-FERMENTED	11.00	FL OZS	330.0 GMS
DINNER			
BEEF-LEAN-SIMMER/ROAST	1.50	SLICES	127.5 GMS
POTATO-BAKED-FLESH & SKIN	1.50	ITEMS	303.0 GMS
PEAS-GREEN-FROZ-BOIL-DRAIN	0.75	CUP	120.0 GMS
SALAD-THREE BEAN-DEL MONTE	12.00	OUNCES	340.2 GMS
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	135.0 GMS
ORANGES-RAW-ALL VARIETIES	2.00	ITEMS	262.0 GMS
MARGARINE-CORN-REG-HARD	2.00	TBSPS	28.2 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
SNACK			
GRAPES-THOMPSON-CAN/WATER	2.00	CUP	490.0 GMS
NUT-WALNUT-PERSIAN/ENGLISH	4.00	TSPS	10.0 GMS

Nutrient Values

Kcalories	3604 Kcal	Carbohydrate	595.6 Gm
Protein	136.3 Gm	Fat	74.19 Gm
Protein: 15%	Carbohydrate: 64%	Fat: 18%	Alcohol: 3%

NMRI-20
DAY 2

Food Name	Serving	Portion	Amount
BREAKFAST			
ORANGE JUICE-CAN	1.25	CUPS	311.3 GMS
EGG-SUBSTITUTE-LIQUID	0.30	CUP	75.3 GMS
CEREAL-SPECIAL K	2.00	CUPS	42.6 GMS
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	84.0 GMS
JAMS/PRESERVES-REGULAR	2.00	TBSPS	40.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-BROWN-PRESSED DOWN	2.00	TBSPS	27.5 GMS
MILK-NONFAT-FLUID	0.50	CUP	122.5 GMS
LUNCH			
SOUP-BLACK BEAN-CAN-WATER	1.50	CUPS	370.5 GMS
BREAD-PITA	2.00	ITEMS	76.0 GMS
FISH-TUNA-WHITE-CAN/WATER	4.00	OUNCES	113.4 GMS
SAL DRESS-MAYO-LOW CAL	3.00	TBSPS	48.0 GMS
PICKLE RELISH-SWEET	1.00	TBSP	15.0 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
PICKLE-DILL-CUCUMBER-MED	1.00	ITEM	65.0 GMS
STRAWBERRIES-FROZ-SLICED	1.50	CUPS	382.5 GMS
LEMONADE-FROZ-DILUTED	1.30	CUPS	322.4 GMS
DINNER			
CARROT-RAW-SHRED-SCRAPED	1.00	CUP	110.0 GMS
BEEF-LEAN-SIMMER/ROAST	1.50	SLICES	127.5 GMS
VEGETABLES-MIXED-FROZ-BOIL	1.00	CUP	182.0 GMS
RICE-WHITE-LONG GRAIN-COOK	1.00	CUP	205.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
RAISINS-SEEDLESS	1.00	TBSP	9.1 GMS
SAL DRESS-RANCH STYLE	1.50	TBSPS	22.5 GMS
PEACHES-CAN/HEAVY SYRUP	1.50	CUPS	384.0 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
SNACK			
CRACKERS-GRAHAM-PLAIN	6.00	ITEMS	42.0 GMS
PEANUT BUTTER-CHUNK STYLE	2.00	TBSPS	32.3 GMS

Nutrient Values			
Kcalories	3695 Kcal	Carbohydrate	610.6 Gm
Protein	151.1 Gm	Fat	84.54 Gm
Protein:	16%	Carbohydrate:	64%
		Fat:	20%
		Alcohol:	0%

NMRI-20
DAY 3

Food Name	Serving	Portion	Amount
BREAKFAST			
ORANGE JUICE-CAN	1.30	CUPS	323.7 GMS
CEREAL-CHEERIOS	2.00	CUPS	45.4 GMS
BREAD-RAISIN-ENRICHED	3.00	SLICES	75.0 GMS
JAMS/PRESERVES-REGULAR	4.00	TBSPS	80.0 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
LUNCH			
CARROT-RAW-WHOLE-SCRAPED	1.00	ITEM	72.0 GMS
ALFALFA SEEDS-SPROUTED-RAW	0.50	CUP	16.5 GMS
SAL DRESS-MAYO-LOW CAL	1.30	TBSPS	20.8 GMS
CHICK-BREAST-NO SKIN-ROAST	0.50	ITEM	86.0 GMS
BREAD-WHOLE WHEAT-SOFT	4.00	SLICES	112.0 GMS
COOKIE-FIG BAR	6.00	ITEMS	84.0 GMS
CELERY-PASCAL-RAW-STALK	1.00	ITEM	40.0 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
DINNER			
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
FISH-COD-BROILED/BUTTER	1.00	PIECE	95.0 GMS
TOMATO-STEW-COOK-HOME REC	2.00	CUPS	202.0 GMS
BEANS-LIMA-FROZ-BOIL-DRAIN	1.00	CUP	170.0 GMS
LETTUCE-ICEBERG-RAW-LEAVES	0.50	SERVING	67.5 GMS
PEPPERS-SWEET-RAW	0.50	ITEM	37.0 GMS
RADISHES-RAW	3.00	ITEMS	13.5 GMS
SAL DRESS-RANCH STYLE	1.00	TBSP	15.0 GMS
PIE-APPLE-HOME REC	1.00	SLICE	135.0 GMS
BREAD-BOSTON BROWN-CAN	2.00	SLICES	90.0 GMS
SNACK			
COOKIE-OATMEAL/RAISIN-MIX	7.00	ITEMS	91.0 GMS
DATES-NATURAL-DRIED-WHOLE	10.00	ITEMS	83.0 GMS

Nutrient Values

Kcalories	3643 Kcal	Carbohydrate	604.8 Gm
Protein	137.0 Gm	Fat	85.86 Gm
Protein: 15%	Carbohydrate: 65%	Fat: 21%	Alcohol: 0%

NMRI-20
DAY 4

Food Name	Serving	Portion	Amount
BREAKFAST			
GRAPE JUICE-CAN & BOTTLE	1.00	CUP	253.0 GMS
EGG-SCRAMBLED-MILK/BUTTER	1.00	ITEM	64.0 GMS
CEREAL-CORN FLAKES-KELLOGG	3.00	CUPS	68.1 GMS
MUFFIN-ENGLISH-PLAIN	2.00	ITEMS	112.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
MILK-NONFAT-FLUID	0.75	CUP	183.8 GMS
LUNCH			
TORTILLA-FLOUR	3.00	ITEMS	90.0 GMS
CHEESE FOOD-AMERICAN-PROC	1.00	OUNCE	28.4 GMS
LETTUCE-ICEBERG-RAW-LEAVES	0.50	SERVING	67.5 GMS
TOMATO-RAW-RED-RIPE	1.00	ITEM	123.0 GMS
BEANS-PINTO-FROZ-BOIL	4.00	OUNCES	113.4 GMS
FRUIT PUNCH DRINK-CAN	1.00	CUP	248.0 GMS
DINNER			
TURK-BREAST-NO SKIN-ROAST	0.25	POUND	113.4 GMS
SWEET POTATO-CAN-VACUUM	1.50	CUPS	300.0 GMS
VEGETABLES-MIXED-FROZ-BOIL	1.50	CUPS	273.0 GMS
ROLL-BROWN & SERVE-ENR	3.00	ITEMS	78.0 GMS
MARGARINE-CORN-REG-HARD	2.00	TBSPS	28.2 GMS
FRUIT COCKTAIL-CAN/JUICE	1.00	CUP	248.0 GMS
SNACK			
PUDD-CHOC-INST-MIX/MILK	1.00	CUP	260.0 GMS
COOKIE-FIG BAR	10.00	ITEMS	140.0 GMS

Nutrient Values

Kcalories	3720 Kcal	Carbohydrate	635.0 Gm
Protein	120.5 Gm	Fat	81.97 Gm
Protein:	13%	Carbohydrate:	67%
		Fat:	20%
		Alcohol:	0%

NMRI-20
DAY 5

Food Name	Serving	Portion	Amount
BREAKFAST			
CEREAL-CHEERIOS	3.00	CUPS	68.1 GMS
BANANAS-RAW-PEELED	2.00	ITEMS	228.0 GMS
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	84.0 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS

LUNCH			
SOUP-CHILI-BEEF-CAN-WATER	1.00	CUP	250.0 GMS
TURK-BREAST-NO SKIN-ROAST	4.00	OUNCES	113.4 GMS
MUSTARD-YELLOW-PREPARED	2.00	TBSPS	30.0 GMS
BREAD-RYE-AMERICAN-LIGHT	3.00	SLICES	75.0 GMS
CABBAGE-COMMON-RAW-SHRED	1.50	CUPS	135.0 GMS
SAL DRESS-MAYO-LOW CAL	2.00	TBSPS	32.0 GMS
VINEGAR-CIDER	2.00	TBSPS	30.0 GMS
PEANUT BUTTER-CHUNK STYLE	2.00	TBSPS	32.3 GMS
CELERY-PASCAL-RAW-STALK	2.00	ITEMS	80.0 GMS
ORANGE JUICE-CAN	1.50	CUPS	373.5 GMS
CANDY-JELLY BEANS	2.00	OUNCES	56.7 GMS

DINNER			
FISH-HALIBUT-BROILED-DRY	1.50	SERVINGS	127.5 GMS
SAUCE-TOMATO-SPANISH-CAN	1.30	CUPS	317.2 GMS
RICE-WHITE-LONG GRAIN-COOK	1.50	CUPS	307.5 GMS
BROCCOLI-FROZ-BOIL-DRAIN	1.00	CUP	185.0 GMS
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	56.0 GMS
SHERBET-ORANGE-2% FAT	1.00	CUP	193.0 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS

SNACK			
GRAPES-THOMPSON-CAN/WATER	0.50	CUP	122.5 GMS
CRACKERS-TRISCUITS	10.00	ITEMS	45.0 GMS
APRICOTS-DRIED-UNCOOKED	0.50	CUP	65.0 GMS

Nutrient Values

Kcalories	3706 Kcal	Carbohydrate	601.9 Gm
Protein	162.1 Gm	Fat	83.55 Gm
Protein:	17%	Carbohydrate:	63%
		Fat:	20%
		Alcohol:	0%

NMRI-20
DAY 6

Food Name	Serving	Portion	Amount
BREAKFAST			
ORANGE JUICE-CAN	1.50	CUPS	373.5 GMS
CEREAL-CORN FLAKES-KELLOGG	3.00	CUPS	68.1 GMS
BANANAS-RAW-PEELED	2.00	ITEMS	228.0 GMS
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	56.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
MILK-NONFAT-FLUID	1.30	CUPS	318.5 GMS
LUNCH			
SOUP-PEA-SPLIT-CAN-WATER	2.00	CUPS	506.0 GMS
CRACKERS-RITZ	15.00	ITEMS	49.9 GMS
CHEESE-COTTAGE-LOWFAT-2%	1.00	CUP	226.0 GMS
CUCUMBER-RAW-SLICED	0.50	CUP	52.0 GMS
TOMATO-RAW-RED-RIPE	1.00	ITEM	123.0 GMS
PEPPERS-SWEET-RAW	1.00	ITEM	74.0 GMS
SAL DRESS-ITALIAN	1.00	TBSP	14.7 GMS
FRUIT PUNCH DRINK-CAN	1.00	CUP	248.0 GMS
DINNER			
FLOUNDER FILET-LE MENU	4.00	OUNCES	113.4 GMS
CORN-FROZ-BOIL-KERNELS	1.50	CUPS	247.5 GMS
SPINACH-FROZ BOIL-CHOPPED	0.75	CUP	153.8 GMS
APPLES-RAW-UNPEELED	0.50	ITEM	69.0 GMS
ORANGES-RAW-SECTIONS	0.50	CUP	90.0 GMS
NUT-WALNUT-PERSIAN/ENGLISH	2.00	TBSPS	15.0 GMS
YOGURT-PLAIN-LOWFAT	1.00	TBSP	14.2 GMS
HONEY-STRAINED/EXTRACTED	1.00	TBSP	21.0 GMS
RASPBERRIES-CAN/SYRUP	1.00	CUP	256.0 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS
SNACK			
PINEAPPLE-CAN/JUICE	1.00	CUP	250.0 GMS
COOKIE-OATMEAL/RAISIN-MIX	6.00	ITEMS	78.0 GMS

Nutrient Values

Kcalories	3527 Kcal	Carbohydrate	603.2 Gm
Protein	122.9 Gm	Fat	83.71 Gm
Protein: 13%	Carbohydrate: 66%	Fat: 21%	Alcohol: 0%

NMRI-20
DAY 7

Food Name	Serving	Portion	Amount
BREAKFAST			
ORANGE JUICE-CAN	1.50	CUPS	373.5 GMS
CEREAL-TOTAL	2.00	CUPS	66.0 GMS
MELON BALLS-FROZEN	1.50	CUPS	259.5 GMS
BREAD-RAISIN-ENRICHED	3.00	SLICES	75.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
MILK-NONFAT-FLUID	0.75	CUP	183.8 GMS

LUNCH			
SOUP-TOMATO RICE-CAN-WATER	1.50	CUPS	370.5 GMS
CHICK-BREAST-NO SKIN-ROAST	4.00	OUNCES	113.4 GMS
SAUCE-BARBECUE	2.00	TBSPS	31.3 GMS
ROLL-HAMBURGER/HOT DOG	2.00	ITEMS	80.0 GMS
CARROT-RAW-WHOLE-SCRAPED	1.00	ITEM	72.0 GMS
PEARS-RAW-BARTLETT-UNPEELED	2.00	ITEMS	332.0 GMS
LEMONADE-FROZ-DILUTED	1.30	CUPS	322.4 GMS

DINNER			
CHICKEN-FRANKFURTER	3.00	ITEMS	135.0 GMS
BEANS-BAKED BEANS-HOME REC	1.50	CUPS	379.5 GMS
BREAD-BOSTON BROWN-CAN	2.00	SLICES	90.0 GMS
CAULIFLOWER-RAW-CHOPPED	1.00	CUP	100.0 GMS
TOMATO-RAW-RED-RIPE	1.00	ITEM	123.0 GMS
SAL DRESS-MAYO-LOW CAL	1.00	TBSP	16.0 GMS
APPLES-CAN-SWEET-HEATED	1.50	CUPS	306.0 GMS
SUGAR-BROWN-PRESSED DOWN	2.00	TBSPS	27.6 GMS
MILK-NONFAT-FLUID	1.00	CUP	245.0 GMS

SNACK			
PRETZEL-THIN-STICK	1.50	OUNCES	42.5 GMS
ORANGES-RAW-ALL VARIETIES	1.00	ITEM	131.0 GMS

Nutrient Values

Kcalories	3676 Kcal	Carbohydrate	625.1 Gm
Protein	130.9 Gm	Fat	85.31 Gm
Protein:	14%	Carbohydrate:	66%
		Fat:	20%
		Alcohol:	0%

APPENDIX B
NMRI-20
DIETS CARBOHYDRATE CALORIES

NMRI-20
DAY 1

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
CEREAL-TOTAL	3.00	CUPS	78.00 Gm (13%)
POTATO-BAKED-FLESH & SKIN	1.50	ITEMS	76.50 Gm (13%)
SALAD-THREE BEAN-DEL MONTE	12.00	OUNCES	60.61 Gm (10%)
JAMS/PRESERVES-REGULAR	4.00	TBSPS	56.00 Gm (9%)
GRAPES-THOMPSON-CAN/WATER	2.00	CUPS	50.40 Gm (8%)
FRUIT COCKTAIL-CAN/JUICE	1.50	CUPS	44.10 Gm (7%)
CHILI CON CARNE/BEANS-CAN	1.30	CUPS	40.30 Gm (7%)
ORANGE JUICE-CAN	1.50	CUPS	36.75 Gm (6%)
ORANGES-RAW-ALL VARIETIES	2.00	ITEMS	30.80 Gm (5%)
ROLL-BROWN & SERVE-ENR	2.00	ITEMS	28.00 Gm (5%)
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	25.70 Gm (4%)
PEAS-GREEN-FROZ-BOIL-DRAIN	0.75	CUP	17.10 Gm (3%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
SPINACH-LEAF-FROZ-BOIL	0.75	CUP	7.57 Gm (1%)
CIDER-FERMENTED	11.00	FL OZS	3.30 Gm (1%)
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	2.82 Gm (0%)
NUT-WALNUT-PERSIAN/ENGLISH	4.00	TSPS	1.83 Gm (0%)
MARGARINE-CORN-REG-HARD	2.00	TBSPS	0.00 Gm (0%)
BEEF-LEAN-SIMMER/ROAST	1.50	SLICES	0.00 Gm (0%)

NMRI-20
DAY 2

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
STRAWBERRIES-FROZ-SLICED	1.50	CUPS	99.15 Gm (16%)
PEACHES-CAN/HEAVY SYRUP	1.50	CUPS	76.50 Gm (13%)
RICE-WHITE-LONG GRAIN-COOK	1.00	CUP	50.00 Gm (8%)
BREAD-PITA	2.00	ITEMS	41.20 Gm (7%)
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	38.10 Gm (6%)
LEMONADE-FROZ-DILUTED	1.30	CUPS	36.40 Gm (6%)
CEREAL-SPECIAL K	2.00	CUPS	32.00 Gm (5%)
ORANGE JUICE-CAN	1.25	CUPS	30.63 Gm (5%)
CRACKERS-GRAHAM-PLAIN	6.00	ITEMS	30.00 Gm (5%)
SOUP-BLACK BEAN-CAN-WATER	1.50	CUPS	29.70 Gm (5%)
JAMS/PRESERVES-REGULAR	2.00	TBSPS	28.00 Gm (5%)
SUGAR-BROWN-PRESSED DOWN	2.00	TBSPS	26.50 Gm (4%)
VEGETABLES-MIXED-FROZ-BOIL	1.00	CUP	23.80 Gm (4%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	26.50 Gm (2%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
CARROT-RAW-SHRED-SCRAPED	1.00	CUP	11.20 Gm (2%)
RAISINS-SEEDLESS	1.00	TBSP	7.18 Gm (1%)
PEANUT BUTTER-CHUNK STYLE	2.00	TBSPS	6.96 Gm (1%)
SAL DRESS-MAYO-LOW CAL	3.00	TBSPS	6.00 Gm (1%)
MILK-NONFAT-FLUID	0.50	CUP	5.95 Gm (1%)
PICKLE RELISH-SWEET	1.00	TBSP	5.00 Gm (1%)
PICKLE-DILL-CUCUMBER-MED	1.00	ITEM	1.00 Gm (0%)
SAL DRESS-RANCH STYLE	1.50	TBSPS	0.90 Gm (0%)
EGG-SUBSTITUTE-LIQUID	0.30	CUP	0.48 Gm (0%)
BEEF-LEAN-SIMMER/ROAST	1.50	SLICES	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)
FISH-TUNA-WHITE-CAN/WATER	4.00	OUNCES	0.00 Gm (0%)

NMRI-20
DAY 3

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
COOKIE-FIG BAR	6.00	ITEMS	63.60 Gm (11%)
COOKIE-OATMEAL/RAISIN-MIX	7.00	ITEMS	62.51 Gm (10%)
DATES-NATURAL-DRIED-WHOLE	10.00	ITEMS	61.00 Gm (10%)
JAMS/PRESERVES-REGULAR	4.00	TBSPS	56.00 Gm (9%)
BREAD-WHOLE WHEAT-SOFT	4.00	SLICES	50.80 Gm (8%)
PIE-APPLE-HOME REC	1.00	SLICE	49.10 Gm (8%)
BREAD-BOSTON BROWN-CAN	2.00	SLICES	42.00 Gm (7%)
BREAD-RAISIN-ENRICHED	3.00	SLICES	39.60 Gm (7%)
BEANS-LIMA-FROZ-BOIL-DRAIN	1.00	CUP	32.00 Gm (5%)
ORANGE JUICE-CAN	1.30	CUPS	31.85 Gm (5%)
CEREAL-CHEERIOS	2.00	CUPS	31.40 Gm (5%)
TOMATO-STEW-COOK-HOME REC	2.00	CUPS	20.80 Gm (3%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
CARROT-RAW-WHOLE-SCRAPED	1.00	ITEM	7.30 Gm (1%)
SAL DRESS-MAYO-LOW CAL	1.30	TBSPS	2.60 Gm (0%)
PEPPERS-SWEET-RAW	0.50	ITEM	1.96 Gm (0%)
CELERY-PASCAL-RAW-STALK	1.00	ITEM	1.45 Gm (0%)
LETTUCE-ICEBERG-RAW-LEAVES	0.50	SERVING	1.41 Gm (0%)
ALFALFA SEEDS-SPROUTED-RAW	0.50	CUP	0.62 Gm (0%)
SAL DRESS-RANCH STYLE	1.00	TBSP	0.60 Gm (0%)
RADISHES-RAW	3.00	ITEMS	0.48 Gm (0%)
FISH-COD-BROILED/BUTTER	1.00	PIECE	0.00 Gm (0%)
CHICK-BREAST-NO SKIN-ROAST	0.50	ITEM	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

NMRI-20
DAY 4

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
COOKIE-FIG BAR	10.00	ITEMS	106.00 Gm (17%)
SWEET POTATO-CAN-VACUUM	1.50	CUPS	63.45 Gm (10%)
PUDD-CHOC-INST-MIX/MILK	1.00	CUP	63.00 Gm (10%)
CEREAL-CORN FLAKES-KELLOGG	3.00	CUPS	58.50 Gm (10%)
TORTILLA-FLOUR	3.00	ITEMS	51.90 Gm (9%)
MUFFIN-ENGLISH-PLAIN	2.00	ITEMS	51.40 Gm (8%)
ROLL-BROWN & SERVE-ENR	3.00	ITEMS	42.00 Gm (7%)
GRAPE JUICE-CAN & BOTTLE	1.00	CUP	37.90 Gm (6%)
VEGETABLES-MIXED-FROZ-BOIL	1.50	CUPS	35.70 Gm (6%)
BEANS-PINTO-FROZ-BOIL	4.00	OUNCES	35.02 Gm (6%)
FRUIT PUNCH DRINK-CAN	1.00	CUP	29.60 Gm (5%)
FRUIT COCKTAIL-CAN/JUICE	1.00	CUP	29.40 Gm (5%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-NONFAT-FLUID	0.75	CUP	8.92 Gm (1%)
TOMATO-RAW-RED-RIPE	1.00	ITEM	5.34 Gm (1%)
CHEESE FOOD-AMERICAN-PROC	1.00	OUNCE	2.09 Gm (0%)
LETTUCE-ICEBERG-RAW-LEAVES	0.50	SERVING	1.41 Gm (0%)
EGG-SCRAMBLED-MILK/BUTTER	1.00	ITEM	1.37 Gm (0%)
TURK-BREAST-NO SKIN-ROAST	0.25	POUND	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

NMRI-20
DAY 5

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
RICE-WHITE-LONG GRAIN-COOK	1.50	CUPS	75.00 Gm (12%)
SHERBET-ORANGE-2% FAT	1.00	CUP	58.70 Gm (10%)
BANANAS-RAW-PEELED	2.00	ITEMS	53.40 Gm (9%)
CEREAL-CHEERIOS	3.00	CUPS	47.10 Gm (8%)
APRICOTS-DRIED-UNCOOKED	0.50	CUP	40.15 Gm (7%)
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	38.10 Gm (6%)
ORANGE JUICE-CAN	1.50	CUPS	36.75 Gm (6%)
BREAD-RYE-AMERICAN-LIGHT	3.00	SLICES	36.00 Gm (6%)
CANDY-JELLY BEANS	2.00	OUNCES	33.82 Gm (6%)
CRACKERS-TRISCUITS	10.00	ITEMS	31.00 Gm (5%)
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	25.40 Gm (4%)
SAUCE-TOMATO-SPANISH-CAN	1.30	CUPS	23.01 Gm (4%)
SOUP-CHILI-BEEF-CAN-WATER	1.00	CUP	21.50 Gm (4%)
GRAPES-THOMPSON-CAN/WATER	0.50	CUP	12.60 Gm (2%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
BROCCOLI-FROZ-BOIL-DRAIN	1.00	CUP	9.85 Gm (2%)
CABBAGE-COMMON-RAW-SHRED	1.50	CUPS	7.24 Gm (1%)
PEANUT BUTTER-CHUNK STYLE	2.00	TBSPS	6.96 Gm (1%)
SAL DRESS-MAYO-LOW CAL	2.00	TBSPS	4.00 Gm (1%)
CELERY-PASCAL-RAW-STALK	2.00	ITEMS	2.90 Gm (0%)
VINEGAR-CIDER	2.00	TBSPS	2.00 Gm (0%)
MUSTARD-YELLOW-PREPARED	2.00	TBSPS	0.60 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)
FISH-HALIBUT-BROILED-DRY	1.50	SERVINGS	0.00 Gm (0%)
TURK-BREAST-NO SKIN-ROAST	4.00	OUNCES	0.00 Gm (0%)

NMRI-20
DAY 6

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
RASPBERRIES-CAN/SYRUP	1.00	CUP	59.80 Gm (10%)
CEREAL-CORN FLAKES-KELLOGG	3.00	CUPS	58.50 Gm (10%)
SOUP-PEA-SPLIT-CAN-WATER	2.00	CUPS	56.00 Gm (9%)
COOKIE-OATMEAL/RAISIN-MIX	6.00	ITEMS	53.58 Gm (9%)
BANANAS-RAW-PEELED	2.00	ITEMS	53.40 Gm (9%)
CORN-FROZ-BOIL-KERNELS	1.50	CUPS	50.55 Gm (8%)
PINEAPPLE-CAN/JUICE	1.00	CUP	39.20 Gm (6%)
ORANGE JUICE-CAN	1.50	CUPS	36.75 Gm (6%)
CRACKERS-RITZ	15.00	ITEMS	31.95 Gm (5%)
FRUIT PUNCH DRINK-CAN	1.00	CUP	29.60 Gm (5%)
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	25.70 Gm (4%)
HONEY-STRAINED/EXTRACTED	1.00	TBSP	17.00 Gm (3%)
MILK-NONFAT-FLUID	1.30	CUPS	15.47 Gm (3%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
ORANGES-RAW-SECTIONS	0.50	CUP	10.60 Gm (2%)
APPLES-RAW-UNPEELED	0.50	ITEM	10.55 Gm (2%)
FLOUNDER FILET-LE MENU	4.00	OUNCES	10.27 Gm (2%)
CHEESE-COTTAGE-LOWFAT-2%	1.00	CUP	8.20 Gm (1%)
SPINACH-FROZ-BOIL-CHOPPED	0.75	CUP	8.17 Gm (1%)
TOMATO-RAW-RED-RIPE	1.00	ITEM	5.34 Gm (1%)
PEPPERS-SWEET-RAW	1.00	ITEM	3.93 Gm (1%)
NUT-WALNUT-PERSIAN/ENGLISH	2.00	TBSPS	2.75 Gm (0%)
CUCUMBER-RAW-SLICED	0.50	CUP	1.51 Gm (0%)
SAL DRESS-ITALIAN	1.00	TBSP	1.50 Gm (0%)
YOGURT-PLAIN-LOWFAT	1.00	TBSP	1.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

NMRI-20
DAY 6

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
BEANS-BAKED BEANS-HOME REC	1.50	CUPS	81.15 Gm (13%)
CEREAL-TOTAL	2.00	CUPS	52.00 Gm (8%)
APPLES-CAN-SWEET-HEATED	1.50	CUPS	51.60 Gm (8%)
PEARS-RAW-BARTLETT-UNPEELED	2.00	ITEMS	50.20 Gm (8%)
BREAD-BOSTON BROWN-CAN	2.00	SLICES	42.00 Gm (7%)
ROLL-HAMBURGER/HOTDOG	2.00	ITEMS	40.20 Gm (6%)
BREAD-RAISIN-ENRICHED	3.00	SLICES	39.60 Gm (6%)
ORANGE JUICE-CAN	1.50	CUPS	36.75 Gm (6%)
LEMONADE-FROZ-DILUTED	1.30	CUPS	36.40 Gm (6%)
PRETZEL-THIN-STICK	1.50	OUNCES	34.30 Gm (5%)
SOUP-TOMATO RICE-CAN-WATER	1.50	CUPS	32.85 Gm (5%)
SUGAR-BROWN-PRESSED DOWN	2.00	TBSPS	26.50 Gm (4%)
MELON BALLS-FROZEN	1.50	CUPS	20.55 Gm (3%)
ORANGES-RAW-ALL VARIETIES	1.00	ITEM	15.40 Gm (2%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-NONFAT-FLUID	1.00	CUP	11.90 Gm (2%)
CHICKEN-FRANKFURTER	3.00	ITEMS	9.18 Gm (1%)
MILK-NONFAT-FLUID	0.75	CUP	8.92 Gm (1%)
CARROT-RAW-WHOLE-SCRAPED	1.00	ITEM	7.30 Gm (1%)
TOMATO-RAW-RED-RIPE	1.00	ITEM	5.34 Gm (1%)
CAULIFLOWER-RAW-CHOPPED	1.00	CUP	4.92 Gm (1%)
SAUCE-BARBECUE	2.00	TBSPS	4.00 Gm (1%)
SAL DRESS-MAYO-LOW CAL	1.00	TBSP	2.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)
CHICK-BREAST-NO SKIN-ROAST	4.00	OUNCES	0.00 Gm (0%)

APPENDIX C
NMRI-30

HIGH CARBOHYDRATE DIETS (30% FAT)

NMRI-30
DAY 1

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
ORANGE JUICE-CAN	1.00	CUP	249.0 GMS
CEREAL-CHEERIOS	3.00	CUPS	68.1 GMS
BAGEL-WATER	3.00	ITEMS	165.0 GMS
JAMS/PRESERVES-REGULAR	2.00	TBSPS	40.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS

LUNCH			
SOUP-VEGETABLE-CAN-LOW SOD	1.50	CUPS	360.0 GMS
CHICK-BREAST-NO SKIN-ROAST	0.50	ITEM	86.0 GMS
SAL DRESS-MAYO-LOW CAL	2.00	TBSPS	32.0 GMS
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	84.0 GMS
TOMATO-RAW-RED-RIPE	0.50	ITEM	61.5 GMS
CUCUMBER-RAW-SLICED	0.25	CUP	26.0 GMS
LETTUCE-ICEBERG-RAW LEAVES	4.00	OUNCES	113.4 GMS
SAL DRESS-RANCH STYLE	3.00	TBSPS	45.0 GMS
PINEAPPLE-CAN/JUICE	1.00	CUP	250.0 GMS
FRUIT PUNCH DRINK-CAN	1.00	CUP	248.0 GMS

DINNER			
HAM-EXTRA LEAN-5% FAT-ROAST	8.00	OUNCES	226.8 GMS
SWEET POTATO-CAN-VACUUM	1.50	CUPS	300.0 GMS
BEANS-GREEN-FROZ-FRENCH	1.00	CUP	135.0 GMS
ROLL-BROWN & SERVE-ENR	2.00	ITEMS	52.0 GMS
PUDD-VAN (BLANCMANGE)-HOME	1.50	CUPS	382.5 GMS
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS

SNACK			
LEMONADE-FROZ-DILUTED	1.00	CUP	248.0 GMS
NUTS-CASHEWS-OIL ROASTED	6.00	TBSPS	48.8 GMS

Nutrient Values

Kcalories	4071 Kcal	Carbohydrate	574.3 Gm
Protein	168.1 Gm	Fat	125.4 Gm
Protein: 16%	Carbohydrate: 56%	Fat: 28%	Alcohol: 0%

NMRI-30
DAY 2

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
APPLE JUICE-CANNED/BOTTLED	1.50	CUPS	372.0 GMS
EGG-SCRAMBLED-MILK-BUTTER	1.00	ITEM	64.0 GMS
CEREAL-SPECIAL K	3.00	CUPS	63.9 GMS
MUFFIN-BRAN-HOME REC	2.00	ITEMS	80.0 GMS
JAMS/PRESERVES-REGULAR	4.00	TBSPS	80.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS
LUNCH			
CARROT-RAW-SHRED-SCRAPED	1.00	CUP	110.0 GMS
RAISINS-SEEDLESS	2.00	TBSPS	18.1 GMS
BEEF-LEAN-SIMMER/ROAST	1.00	SLICE	85.0 GMS
BREAD-RYE-AMERICAN-LIGHT	2.00	SLICES	50.0 GMS
SAL DRESS-MAYO-LOW CAL	1.00	TBSP	16.0 GMS
MUSTARD-YELLOW-PREPARED	1.00	TSP	5.0 GMS
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
BROWNIES/CHOC ICING-FROZEN	3.00	ITEMS	75.0 GMS
DINNER			
CHICK-BREAST-NO SKIN-ROAST	1.00	ITEM	172.0 GMS
PEAS-GREEN-FROZ-BOIL-DRAIN	1.00	CUP	160.0 GMS
GRAVY-CHICKEN-CANNED	0.25	CUP	59.5 GMS
RICE-WHITE-LONG GRAIN-COOK	1.00	CUP	205.0 GMS
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	56.0 GMS
PIE-PEACH-HOME REC	1.00	SLICE	135.0 GMS
TEA-BREWED	2.00	CUPS	473.6 GMS
MILK-2% FAT-LOWFAT-FLUID	0.50	CUP	122.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.0 GMS
SNACK			
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	227.0 GMS
COOKIE-SANDWICH-CHOC/VAN	7.00	ITEMS	70.0 GMS

Nutrient Values

Kcalories	4110 Kcal	Carbohydrate	591.4 Gm
Protein	168.5 Gm	Fat	124.9 Gm
Protein: 16%	Carbohydrate: 57%	Fat: 27%	Alcohol: 0%

NMRI-30
DAY 3

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
CEREAL-CHEERIOS	2.00	CUPS	45.4 GMS
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	56.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
JAMS/PRESERVES-REGULAR	2.00	TBSPS	40.0 GMS
PEACHES-CAN/WATER PACK	3.00	CUPS	732.0 GMS
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.0 GMS

LUNCH			
SOUP-CHICKEN NOODLE-DEHY	1.00	CUP	252.0 GMS
BAGEL-WATER	2.00	ITEMS	110.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
CHEESE-COTTAGE-LOWFAT-2%	1.00	CUP	226.0 GMS
PINEAPPLE-CAN/JUICE	1.00	CUP	250.0 GMS
FRUIT PUNCH DRINK-CAN	12.00	FL OZS	372.0 GMS

DINNER			
SQUASH-ZUCCHINI-FROZ-BOIL	1.00	CUP	223.0 GMS
SPAGHETTI-COOK-TENDER-HOT	1.00	CUP	140.0 GMS
HAMBURGER-GROUND-REG-FRIED	2.00	OUNCES	56.7 GMS
SAUCE-SPAGHETTI-CANNED	0.50	CUP	124.5 GMS
CHEESE-PARMESAN-GRATED	2.00	TBSPS	12.5 GMS
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	135.0 GMS
TOMATO-RAW-RED-RIPE	0.50	ITEM	61.5 GMS
CUCUMBER-RAW-SLICED	0.25	CUP	26.0 GMS
SAL DRESS-ITALIAN	2.00	TBSPS	29.4 GMS
BREAD-FRENCH-ENRICHED	2.00	SLICES	70.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
PIE-CHERRY-HOM REC	1.00	SLICE	135.0 GMS
MILK-2% FAT-LOWFAT-FLUID	1.50	CUPS	366.0 GMS

SNACK			
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	227.0 GMS
COOKIE-VANILLA WAFER	20.00	ITEMS	80.0 GMS

Nutrient Values

Kcalories	4067 Kcal	Carbohydrate	604.2 Gm
Protein	137.1 Gm	Fat	129.5 Gm
Protein: 13%	Carbohydrate: 59%	Fat: 28%	Alcohol: 0%

NMRI-30
DAY 4

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	0.50	CUP	122.0 GMS
GRAPE JUICE-CAN & BOTTLE	0.75	CUP	189.8 GMS
CEREAL-CHEERIOS	2.00	CUPS	45.4 GMS
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	56.0 GMS
JAMS/PRESERVES-REGULAR	4.00	TBSPS	80.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.0 GMS

LUNCH			
BREAD-PITA	3.00	ITEMS	114.0 GMS
FISH-TUNA-WHITE-CAN/WATER	3.00	OUNCES	85.0 GMS
SAL DRESS-MAYO-LOW CAL	3.00	TBSPS	48.0 GMS
FRUIT COCKTAIL-CAN/JUICE	1.00	CUP	248.0 GMS
MILK-2% FAT-LOWFAT-FLUID	1.25	CUPS	305.0 GMS
PICKLE RELISH-SWEET	1.00	TBSP	15.0 GMS
CAULIFLOWER-RAW-CHOPPED	0.50	CUP	50.0 GMS

DINNER			
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
MARGARINE-CORN-REG-HARD	2.00	TBSPS	28.2 GMS
CHIC-BREAST-NO SKIN-ROAST	1.00	ITEM	172.0 GMS
CREAM-SOUR-CULTURED	0.25	CUP	57.5 GMS
POTATO-BAKED-FLESH & SKIN	1.50	ITEMS	303.0 GMS
VEGETABLES-MIXED-FROZ-BOIL	1.00	CUP	182.0 GMS
LETTUCE-ICEBERG-RAW-LEAVES	0.50	SERVING	67.5 GMS
CUCUMBER-RAW-SLICED	0.50	CUP	52.0 GMS
PEPPERS-SWEET-RAW	0.50	ITEM	37.0 GMS
SAL DRESS-RANCH STYLE	3.00	TBSPS	45.0 GMS
ROLL-BROWN & SERVE-ENR	3.00	ITEMS	78.0 GMS
GELATIN DESSERT-PREP	1.00	CUP	240.0 GMS
CREAM-WHIP-IMIT-FROZ	0.50	CUP	37.5 GMS
LEMONADE-FROZ-DILUTED	1.00	CUP	248.0 GMS

SNACK			
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	277.0 GMS
COOKIE-VANILLA WAFER	6.00	ITEMS	24.0 GMS

Nutrient Values			
Kcalories	4008 Kcal	Carbohydrate	585.3 Gm
Protein	163.8 Gm	Fat	120.3 Gm
Protein:	16%	Carbohydrate:	57%
		Fat:	27%
		Alcohol:	0%

NMRI-30
DAY 5

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
ORANGE JUICE-CAN	2.00	CUPS	498.0 GMS
CEREAL-CORN FLAKES-KELLOGG	3.00	CUPS	68.1 GMS
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	56.0 GMS
JAMS/PRESERVES-REGULAR	2.00	TBSPS	40.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.0 GMS
LUNCH			
TURK-BREAST-NO SKIN-ROAST	2.00	OUNCES	56.7 GMS
SAL DRESS-MAYO-LOW CAL	2.00	TBSPS	32.0 GMS
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	84.0 GMS
CARROT-RAW-WHOLE-SCRAPED	1.00	ITEM	72.0 GMS
CELERY-PASCAL-RAW-STALK	2.00	ITEMS	80.0 GMS
RAISINS-SEEDLESS	0.50	CUP	72.5 GMS
SOUP-BEAN/BACON-CAN-WATER	1.30	CUPS	328.9 GMS
LEMONADE-FROZ-DILUTED	2.00	CUPS	496.0 GMS
DINNER			
HAMB PATTY-BEEF-20% FAT	2.00	ITEMS	170.0 GMS
TOMATO CATSUP	5.00	TBSPS	75.0 GMS
MUSTARD-YELLOW-PREPARED	2.00	TSPS	10.0 GMS
ROLL-HAMBURGER/HOTDOG	2.00	ITEMS	80.0 GMS
POTATO CHIPS-SALT ADDED	30.00	ITEMS	60.0 GMS
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	135.0 GMS
TOMATO-RAW-RED-RIPE	0.30	ITEM	36.9 GMS
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
SNACK			
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	277.0 GMS
COOKIE-SUGAR-MIX	4.00	ITEMS	80.0 GMS

Nutrient Values

Kcalories	3880 Kcal	Carbohydrate	595.7 Gm
Protein	137.4 Gm	Fat	114.5 Gm
Protein:	14%	Carbohydrate:	60%
		Fat:	26%
		Alcohol:	0%

NMRI-30
DAY 6

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
ORANGE JUICE-CAN	0.75	CUP	186.8 GMS
CEREAL-SPECIAL K	4.00	CUPS	85.2 GMS
BREAD-RAISIN-ENRICHED	2.00	SLICES	50.0 GMS
JAMS/PRESERVES-REGULAR	2.00	TBSPS	40.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS

LUNCH			
HAM-REG-LUNCH MEAT-11% FAT	3.00	SLICES	85.2 GMS
SAL DRESS-MAYO-LOW CAL	3.00	TBSPS	48.0 GMS
MUSTARD-YELLOW-PREPARED	2.00	TSPS	10.0 GMS
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	56.0 GMS
APRICOTS-DRIED-UNCOOKED	0.75	CUP	97.5 GMS
CELERY-PASCAL-RAW-STALK	1.00	ITEM	40.0 GMS
RADISHES-RAW	8.00	ITEMS	36.0 GMS
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	227.0 GMS
APPLE JUICE-CANNED/BOTTLED	2.00	CUPS	496.0 GMS
FLOUNDER FILET-LE MENU	1.00	ITEM	298.0 GMS

DINNER			
BROCCOLI-FROZ-BOIL-DRAIN	1.00	CUP	185.0 GMS
CORN-FROZ-BOIL-KERNELS	1.00	CUP	165.0 GMS
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	135.0 GMS
TOMATO-RAW-RED-RIPE	0.75	ITEM	92.3 GMS
SAL DRESS-ITALIAN	2.00	TBSPS	29.4 GMS
ICE CREAM-VAN-HARD-10% FAT	1.00	CUP	133.0 GMS
SYRUP-CHOC FLAVORED-FUDGE	2.00	FL OZS	76.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS

SNACK			
CAKE-POUND-HOME RECIPE	2.00	SLICES	66.0 GMS
YOGURT-FRUIT-FLAVOR-LOWFAT	1.00	CUP	227.0 GMS

Nutrient Values

Kcalories	3997 Kcal	Carbohydrate	597.9 Gm
Protein	130.6 Gm	Fat	134.8 Gm
Protein:	13%	Carbohydrate:	58%
		Fat:	29%
		Alcohol:	0%

NMRI-30
DAY 7

Food Name	Serving	Portion	Amount
BREAKFAST			
MILK-2% FAT-LOWFAT-FLUID	0.50	CUP	122.0 GMS
JAMS/PRESERVES-REGULAR	1.00	TBSP	20.0 GMS
ORANGE JUICE-CAN	2.00	CUPS	498.0 GMS
CEREAL-RICE KRISPIES	4.00	CUPS	113.6 GMS
MUFFIN-ENGLISH-PLAIN	2.00	ITEMS	112.0 GMS
JAMS/PRESERVES-REGULAR	2.00	TBSPS	40.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.0 GMS

LUNCH			
TOMATO-RAW-RED-RIPE	1.00	ITEM	123.0 GMS
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	135.0 GMS
SAL DRESS-RANCH STYLE	1.00	TBSP	15.0 GMS
PIZZA-CHEESE-BAKED	2.00	SLICES	240.0 GMS
CAKE-POUND-HOME RECIPE	1.00	SLICE	33.0 GMS
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS

DINNER			
BEEF-LEAN/FAT-SIMM/ROAST	1.00	SLICE	85.0 GMS
SPINACH-FROZ-BOIL-CHOPPED	0.50	CUP	102.5 GMS
RICE-WHITE-LONG GRAIN-COOK	1.00	CUP	205.0 GMS
BREAD-RYE-AMERICAN-LIGHT	3.00	SLICES	75.0 GMS
ORANGES-RAW-SECTIONS	2.00	CUPS	360.0 GMS
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	244.0 GMS
MARGARINE-CORN-REG-HARD	1.00	TBSP	14.1 GMS

SNACK			
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	227.0 GMS
COOKIE-OATMEAL/RAISIN-MIX	7.00	ITEMS	91.0 GMS

Nutrient Values

Kcalories	4052 Kcal	Carbohydrate	625.4 Gm
Protein	126.9 Gm	Fat	118.6 Gm

Protein: 12% Carbohydrate: 61% Fat: 26% Alcohol: 0%

APPENDIX D

NMRI-30

DIETS CARBOHYDRATE CALORIES

NMRI-30
DAY 1

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
BAGEL-WATER	3.00	ITEMS	92.70 Gm (16%)
SWEET POTATO-CAN-VACUUM	1.50	CUPS	63.45 Gm (11%)
PUDD-VAN (BLANCMANGE)-HOME	1.50	CUPS	61.50 Gm (11%)
CEREAL-CHEERIOS	3.00	CUPS	47.10 Gm (8%)
PINEAPPLE-CAN/JUICE	1.00	CUP	39.20 Gm (7%)
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	38.10 Gm (7%)
FRUIT PUNCH DRINK-CAN	1.00	CUP	29.60 Gm (5%)
JAMS/PRESERVES-REGULAR	2.00	TBSPS	28.00 Gm (5%)
LEMONADE-FROZ-DILUTED	1.00	CUP	28.00 Gm (5%)
ROLL-BROWN & SERVE-ENR	2.00	ITEMS	28.00 Gm (5%)
ORANGE JUICE-CAN	1.00	CUP	24.50 Gm (4%)
SOUP-VEGETABLE-CAN-LOW SOD	1.50	CUPS	21.60 Gm (4%)
NUTS-CASHEWS-OIL ROASTED	6.00	TBSPS	13.91 Gm (2%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
BEANS-GREEN-FROZ-FRENCH	1.00	CUP	8.26 Gm (1%)
SAL DRESS-MAYO-LOW CAL	2.00	TBSPS	4.00 Gm (1%)
HAM-EXTRA LEAN-5% FAT-ROAST	8.00	OUNCES	3.40 Gm (1%)
TOMATO-RAW-RED-RIPE	0.50	ITEM	2.67 Gm (0%)
LETTUCE-ICEBERG-RAW-LEAVES	4.00	OUNCES	2.35 Gm (0%)
SAL DRESS-RANCH STYLE	3.00	TBSPS	1.80 Gm (0%)
CUCUMBER-RAW-SLICED	0.25	CUP	0.75 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)
CHICK-BREAST-NO SKIN-ROAST	0.50	ITEM	0.00 Gm (0%)

NMRI-30
DAY 2

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
JAMS/PRESERVES-REGULAR	4.00	TBSPS	56.00 Gm (9%)
PIE-PEACH-HOME REC	1.00	SLICE	52.00 Gm (9%)
RICE-WHITE-LONG GRAIN-COOK	1.00	CUP	50.00 Gm (8%)
COOKIE-SANDWICH-CHOC/VAN	7.00	ITEMS	49.00 Gm (8%)
CEREAL-SPECIAL K	3.00	CUPS	48.00 Gm (8%)
BROWNIES/CHOC ICING-FROZEN	3.00	ITEMS	45.00 Gm (8%)
APPLE JUICE-CANNED/BOTTLED	1.50	CUPS	43.50 Gm (7%)
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	43.20 Gm (7%)
MUFFIN-BRAN-HOME REC	2.00	ITEMS	33.40 Gm (6%)
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	25.40 Gm (4%)
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.00 Gm (4%)
BREAD-RYE-AMERICAN-LIGHT	2.00	SLICES	24.00 Gm (4%)
PEAS-GREEN-FROZ-BOIL-DRAIN	1.00	CUP	22.80 Gm (4%)
RAISINS-SEEDLESS	2.00	TBSPS	14.38 Gm (2%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
CARROT-RAW-SHRED-SCRAPED	1.00	CUP	11.20 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	0.50	CUP	5.85 Gm (1%)
GRAVY-CHICKEN-CANNED	0.25	CUP	3.22 Gm (1%)
SAL DRESS-MAYO-LOW CAL	1.00	TBSP	2.00 Gm (0%)
TEA-BREWED	2.00	CUPS	1.60 Gm (0%)
EGG-SCRAMBLED-MILK/BUTTER	1.00	ITEM	1.37 Gm (0%)
MUSTARD-YELLOW-PREPARED	1.00	TSP	0.10 Gm (0%)
CHICK-BREAST-NO SKIN-ROAST	1.00	ITEM	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)
BEEF-LEAN-SIMMER/ROAST	1.00	SLICE	0.00 Gm (0%)

NMRI-30
DAY 3

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
BAGEL-WATER	2.00	ITEMS	61.80 Gm (10%)
COOKIE-VANILLA WAFER	20.00	ITEMS	60.00 Gm (10%)
PIE-CHERRY-HOME REC	1.00	SLICE	52.00 Gm (9%)
PEACHES-CAN/WATER PACK	3.00	CUPS	44.70 Gm (7%)
FRUIT PUNCH DRINK-CAN	12.00	FL OZS	44.40 Gm (7%)
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	43.20 Gm (7%)
PINEAPPLE-CAN/JUICE	1.00	CUP	39.20 Gm (6%)
BREAD-FRENCH-ENRICHED	2.00	SLICES	35.40 Gm (6%)
SPAGHETTI-COOK-TENDER-HOT	1.00	CUP	32.00 Gm (5%)
CEREAL-CHEERIOS	2.00	CUPS	31.40 Gm (5%)
JAMS/PRESERVES-REGULAR	2.00	TBSPS	28.00 Gm (5%)
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	25.70 Gm (4%)
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.00 Gm (4%)
SAUCE-SPAGHETTI-CANNED	0.50	CUP	19.85 Gm (3%)
MILK-2% FAT-LOWFAT-FLUID	1.50	CUPS	17.55 Gm (3%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
CHEESE-COTTAGE-LOWFAT-2%	1.00	CUP	8.20 Gm (1%)
SQUASH-ZUCCHINI-FROZ-BOIL	1.00	CUP	7.94 Gm (1%)
SOUP-CHICKEN-NOODLE-DEHY	1.00	CUP	7.41 Gm (1%)
SAL DRESS-ITALIAN	2.00	TBSPS	3.00 Gm (0%)
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	2.82 Gm (0%)
TOMATO-RAW-RED-RIPE	0.50	ITEM	2.67 Gm (0%)
CUCUMBER-RAW-SLICED	0.25	CUP	0.75 Gm (0%)
CHEESE-PARMESAN-GRATED	2.00	TBSPS	0.46 Gm (0%)
HAMBURGER-GROUND-REG-FRIED	2.00	OUNCES	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

NMRI-30
DAY 4

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
POTATO-BAKED-FLESH & SKIN	1.50	ITEMS	76.50 Gm (13%)
BREAD-PITA	3.00	ITEMS	61.80 Gm (11%)
JAMS/PRESERVES-REGULAR	4.00	TBSPS	56.00 Gm (10%)
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	43.20 Gm (7%)
ROLL-BROWN & SERVE-ENR	3.00	ITEMS	42.00 Gm (7%)
GELATIN DESSERT-PREP	1.00	CUP	34.00 Gm (6%)
CEREAL-CHEERIOS	2.00	CUPS	31.40 Gm (5%)
FRUIT COCKTAIL-CAN/JUICE	1.00	CUP	29.40 Gm (5%)
GRAPE JUICE-CAN & BOTTLE	0.75	CUP	28.43 Gm (5%)
LEMONADE-FROZ-DILUTED	1.00	CUP	28.00 Gm (5%)
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	25.40 Gm (4%)
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.00 Gm (4%)
VEGETABLES-MIXED-FROZ-BOIL	1.00	CUP	23.80 Gm (4%)
COOKIE-VANILLA WAFER	6.00	ITEMS	18.00 Gm (3%)
MILK-2% FAT-LOWFAT-FLUID	1.25	CUPS	14.63 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
CREAM-WHIP-IMIT-FROZ	0.50	CUP	8.65 Gm (1%)
SAL DRESS-MAYO-LOW CAL	3.00	TBSPS	6.00 Gm (1%)
MILK-2% FAT-LOWFAT-FLUID	0.50	CUP	5.85 Gm (1%)
PICKLE RELISH-SWEET	1.00	TBSPS	5.00 Gm (1%)
CAULIFLOWER-RAW-CHOPPED	0.50	CUP	2.46 Gm (0%)
CREAM-SOUR-CULTURED	0.25	CUP	2.45 Gm (0%)
PEPPERS-SWEET-RAW	0.50	ITEM	1.96 Gm (0%)
SAL DRESS-RANCH STYLE	3.00	TBSPS	1.80 Gm (0%)
CUCUMBER-RAW-SLICED	0.50	CUP	1.51 Gm (0%)
LETTUCE-ICEBERG-RAW-LEAVES	0.50	SERVING	1.41 Gm (0%)
CHICK-BREAST-NO SKIN-ROAST	1.00	ITEM	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	2.00	TBSPS	0.00 Gm (0%)
FISH-TUNA-WHITE-CAN/WATER	3.00	OUNCES	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

NMRI-30
DAY 5

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
CEREAL-CORN FLAKES-KELLOGG	3.00	CUPS	58.50 Gm (10%)
RAISINS-SEEDLESS	0.50	CUP	57.50 Gm (10%)
LEMONADE-FROZ-DILUTED	2.00	CUPS	56.00 Gm (9%)
COOKIE-SUGAR-MIX	4.00	ITEMS	52.40 Gm (9%)
ORANGE JUICE-CAN	2.00	CUPS	49.00 Gm (8%)
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	43.20 Gm (7%)
ROLL-HAMBURGER/HOTDOG	2.00	ITEMS	40.20 Gm (7%)
BREAD-WHOLE WHEAT-SOFT	3.00	SLICES	38.10 Gm (6%)
POTATO CHIPS-SALT ADDED	30.00	ITEMS	31.20 Gm (5%)
SOUP-BEAN/BACON-CAN-WATER	1.30	CUPS	29.64 Gm (5%)
JAMS/PRESERVES-REGULAR	2.00	TBSPS	28.00 Gm (5%)
MUFFIN-ENGLISH-PLAIN	1.00	ITEM	25.70 Gm (4%)
SUGAR-WHITE-GRANULATED	2.00	TBSPS	24.00 Gm (4%)
TOMATO CATSUP	5.00	TBSPS	20.00 Gm (3%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
CARROT-RAW-WHOLE-SCRAPED	1.00	ITEM	7.30 Gm (1%)
SAL DRESS-MAYO-LOW CAL	2.00	TBSPS	4.00 Gm (1%)
CELERY-PASCAL-RAW-STALK	2.00	ITEMS	2.90 Gm (0%)
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	2.82 Gm (0%)
TOMATO-RAW-RED-RIPE	0.30	ITEM	1.60 Gm (0%)
MUSTARD-YELLOW-PREPARED	2.00	TSPS	0.20 Gm (0%)
HAMB PATTY-BEEF-10% FAT	2.00	ITEMS	0.00 Gm (8%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)
TURK-BREAST-NO SKIN-ROAST	2.00	OUNCES	0.00 Gm (0%)

NMRI-30

DAY 6

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
CEREAL-SPECIAL K	4.00	CUPS	64.00 Gm (11%)
APRICOTS-DRIED-UNCOOKED	0.75	CUP	60.23 Gm (10%)
APPLE JUICE-CANNED/BOTTLED	2.00	CUPS	58.00 Gm (10%)
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	43.20 Gm (7%)
SYRUP-CHOC FLAVORED-FUDGE	2.00	FL OZS	40.00 Gm (7%)
CORN-FROZ-BOIL-KERNELS	1.00	CUP	33.70 Gm (6%)
CAKE-POUND-HOME RECIPE	2.00	SLICES	32.00 Gm (5%)
ICE CREAM-VAN-HARD-10% FAT	1.00	CUP	31.70 Gm (5%)
JAMS/PRESERVES-REGULAR	2.00	TBSPS	28.00 Gm (5%)
FLOUNDER FILET-LE MENU	1.00	ITEM	27.00 Gm (5%)
BREAD-RAISIN-ENRICHED	2.00	SLICES	26.40 Gm (4%)
BREAD-WHOLE WHEAT-SOFT	2.00	SLICES	25.40 Gm (4%)
ORANGE JUICE-CAN	0.75	CUP	18.38 Gm (3%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
BROCCOLI-FROZ-BOIL-DRAIN	1.00	CUP	9.85 Gm (2%)
SAL DRESS-MAYO-LOW CAL	3.00	TBSPS	6.00 Gm (1%)
TOMATO-RAW-RED-RIPE	0.75	ITEM	4.00 Gm (1%)
SAL DRESS-ITALIAN	2.00	TBSPS	3.00 Gm (1%)
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	2.82 Gm (0%)
HAM-REG-LUNCH MEAT 11% FAT	3.00	SLICES	2.64 Gm (0%)
CELERY-PASCAL-RAW-STALK	1.00	ITEM	1.45 Gm (0%)
RADISHES-RAW	8.00	ITEMS	1.28 Gm (0%)
MUSTARD-YELLOW-PREPARED	2.00	TSPS	0.20 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

NMRI-30
DAY 7

Sorted on Carbohydrate

Food Name	Serving	Portion	Carbohydrate
CEREAL-RICE KRISPIES	4.00	CUPS	99.20 Gm (16%)
PIZZA-CHEESE-BAKED	2.00	SLICES	78.20 Gm (13%)
COOKIE-OATMEAL/RAISIN-MIX	7.00	ITEMS	62.51 Gm (10%)
MUFFIN-ENGLISH-PLAIN	2.00	ITEMS	51.40 Gm (8%)
RICE-WHITE-LONG GRAIN-COOK	1.00	CUP	50.00 Gm (8%)
ORANGE JUICE-CAN	2.00	CUPS	49.00 Gm (8%)
YOGURT-FRUIT FLAVOR-LOWFAT	1.00	CUP	43.20 Gm (7%)
ORANGES-RAW-SECTIONS	2.00	CUPS	42.40 Gm (7%)
BREAD-RYE-AMERICAN-LIGHT	3.00	SLICES	36.00 Gm (6%)
JAMS/PRESERVES-REGULAR	2.00	TBSPS	28.00 Gm (4%)
CAKE-POUND-HOME RECIPE	1.00	SLICE	16.00 Gm (3%)
JAMS/PRESERVES-REGULAR	1.00	TBSPS	14.00 Gm (2%)
SUGAR-WHITE-GRANULATED	1.00	TBSP	12.00 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	1.00	CUP	11.70 Gm (2%)
MILK-2% FAT-LOWFAT-FLUID	0.50	CUP	5.85 Gm (1%)
SPINACH-FROZ-BOIL-CHOPPED	0.50	CUP	5.45 Gm (1%)
TOMATO-RAW-RED-RIPE	1.00	ITEM	5.34 Gm (1%)
LETTUCE-ICEBERG-RAW-LEAVES	1.00	SERVING	2.82 Gm (0%)
SAL DRESS-RANCH STYLE	1.00	TBSP	0.60 Gm (0%)
BEEF-LEAN/FAT-SIMM/ROAST	1.00	SLICE	0.00 Gm (0%)
MARGARINE-CORN-REG-HARD	1.00	TBSP	0.00 Gm (0%)

APPENDIX E

NMRI-30

10 PERSON SHOPPING LIST FOR DAY 1

Shopping List for NMRI-30, Day 1, 10 People

Item #	Quantity	Required
Fruits		
LEMONADE-FROZ-DILUTED	5 POUNDS	2 KILOS
ORANGE JUICE-CAN	5 POUNDS	2 KILOS (3 QUARTS)
PINEAPPLE-CAN/JUICE	6 POUNDS	3 KILOS
Vegetables		
BEANS-GREEN-FROZ-FRENCH	3 POUNDS	1 KILO
CUCUMBER-RAW-SLICED	9 OUNCES	260 GRAMS
LETTUCE-ICEBERG-RAW-LEAVES	3 POUNDS	1 KILO
SWEET POTATO-CAN-VACUUM	7 POUNDS	3 KILOS
TOMATO-RAW-RED-RIPE	1 POUND	615 GRAMS
Breakfast Cereals		
CEREAL-CHEERIOS	2 POUNDS	681 GRAMS
Breads		
BAGEL-WATER	4 POUNDS	2 KILOS
BREAD-WHOLE WHEAT-SOFT	2 POUNDS	840 GRAMS
ROLL-BROWN & SERVE-ENR	1 POUND	520 GRAMS
Soups		
SOUP-VEGETABLE-CAN-LOW SOD	8 POUNDS	4 KILOS
Beverages		
FRUIT PUNCH DRINK-CAN	5 POUNDS	2 KILOS (3 QUARTS)
Nuts & Seeds		
NUTS-CASHEWS-OIL ROASTED	1 POUND	488 GRAMS
Fats & Oils		
SAL DRESS-MAYO-LOW CAL	11 OUNCES	320 GRAMS
MARGARINE-CORN-REG-HARD	10 OUNCES	282 GRAMS
SAL DRESS-RANCH STYLE	16 OUNCES	450 GRAMS
Dairy Products		
MILK-2% FAT-LOWFAT-FLUID	11 POUNDS	5 KILOS (1 GALLON)

Shopping List for NMRI-30, Day 1, 10 People

<u>Item #</u>	<u>Food Name</u>	<u>Quantity</u>	<u>Required</u>
Meats			
	HAM-EXTRA LEAN-5% FAT-ROAST	5 POUNDS	2 KILOS
Poultry			
	CHICK-BREAST-NO SKIN-ROAST	2 POUNDS	860 GRAMS
Desserts			
	PUDD-VAN (BLANCMANGE)-HOME	8 POUNDS	4 KILOS
Sugars & Sweets			
	JAMS/PRESERVES-REGULAR	14 OUNCES	400 GRAMS
	SUGAR-WHITE-GRANULATED	4 OUNCES	120 GRAMS